



National Weather Service

Storm Data and Unusual Weather Phenomena



May 2001

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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SOUTH DAKOTA, West

Harding County									
Buffalo	01	0144MST 0224MST			0	0			Thunderstorm Wind (G66) ^M
Butte County									
Belle Fourche	01	0219MST			0	0			Thunderstorm Wind (G60)
Lawrence County									
Deadwood	01	0230MST			0	0			Thunderstorm Wind (G60)
Meade County									
Sturgis	01	0240MST			0	0			Thunderstorm Wind (G60)

A potent upper level short wave was moving across eastern Montana and into northwestern South Dakota. With a moist and unstable atmosphere in place, a line of thunderstorms developed along the Montana and Wyoming border and moved into northwestern South Dakota. Strong outflow from these thunderstorms produced a strong and persistent gust front that moved across northwestern South Dakota.

SDZ001-013-025-031 Harding - Meade Co. Plains - Northern Foot Hills - Pennington Plains

01	0256MST 0600MST				0	0			High Wind (G64) ^M
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A potent short wave moved across the Montana/Wyoming border and into northwestern South Dakota after midnight. A line of thunderstorms developed as the wave moved across northeastern Wyoming and northwestern South Dakota. As the line of storms moved into northwestern South Dakota it encountered more stable and drier air. The thunderstorms quickly dissipated after producing a strong and persistent gust front. Behind the gust front a very tight pressure gradient was established. High winds in excess of 40 mph sustained with gusts to 64 mph were noted over the area. The high winds persisted for few hours before subsiding as the pressure gradient relaxed.

Custer County									
Pringle	09	1550MST 1600MST			0	0	0		Hail (1.75)
Custer County									
5 N Pringle	09	1600MST 1610MST			0	0	0		Hail (1.00)
Custer County									
Wind Cave	09	1605MST 1615MST			0	0	0		Hail (0.75)
Custer County									
6 E Wind Cave	09	1610MST 1620MST			0	0	0		Hail (0.75)
Fall River County									
1 NE Oral	09	1630MST 1640MST			0	0	0		Hail (0.75)
Custer County									
Buffalo Gap	09	1635MST 1645MST			0	0	0		Hail (0.75)

An isolated supercell thunderstorm developed and moved across southern Custer County. As it strengthened, this storm began to move to the right of the mean low level wind. The storm began to move southeast and it crossed into northeastern Fall River County, where it weakened.

Fall River County									
Provo	10	1628MST 1638MST			0	0	0		Hail (0.88)
Fall River County									
2 N Ardmore	10	1630MST 1645MST			0	0	0		Hail (0.75)

An isolated severe thunderstorm moved out of eastern Wyoming and across western Fall River county. The storm became a



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SOUTH DAKOTA, West

SDZ001>002-012>014-
026-031>032-043>044-
046>047-049

supercell and exhibited a movement to the right of the mean low level wind flow. The storm moved south-southeast across the county.

Harding - Perkins - Butte - Meade Co. Plains - Ziebach - Central Foot Hills - Pennington Plains - Haakon - Jackson - Bennett - Mellette - Todd - Tripp

20	0207MST	0	0			
23	1435MST					High Wind (G60)^M

A deep cut off upper level low pressure system persisted over Minnesota for several days. The associated surface low was over Minnesota, as the system was "stacked" vertically. A very tight surface pressure gradient existed over the Dakotas from May 20th through the afternoon of the 23rd. The low level pressure gradient was very tight as well, with 35 to 60 mph winds only a few thousand feet above the surface. Strong winds were observed over western South Dakota these 4 days. With day time heating, the boundary layer became mixed and the high winds aloft were able to reach the surface at times, producing surface winds of 30 to 45 mph with very occasional gusts to 55 to 60 mph. Overnight winds subsided, but still blew 20 to 30 mph with gusts to 45 mph. The winds caused no damage, however the 4 day duration of these strong winds was certainly an unusual event over western South Dakota.

Mellette County
White River

31	1310MST 1320MST	0	0	0		Hail (1.25)
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Mellette County
4 S White River

31	1327MST 1337MST	0	0	0		Hail (1.00)
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Todd County
Mission

31	1342MST 1352MST	0	0	0		Hail (1.75)
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Todd County
2 E Mission

31	1353MST 1403MST	0	0	0		Hail (0.75)
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Todd County
14 S Mission

31	1414MST 1424MST	0	0	0		Hail (0.88)
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An isolated severe thunderstorm moved south-southeast across Mellette County into Todd County. The storm produced large hail across both of these counties, and continued to maintain strength as it crossed the state line into northern Nebraska.

Todd County
Mission

31	1322MST 1330MST	0	0			Funnel Cloud
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Two funnel clouds were reported by law enforcement and county school officials in Mission.

WYOMING, Northeast

Campbell County
Gillette Arpt

01	0107MST	0	0			Thunderstorm Wind (G60)^M
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Campbell County
Echeta

01	0142MST	0	0			Thunderstorm Wind (G75)^M
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An small line of thunderstorms moved along the Montana/Wyoming border shortly after midnight. The line of storms was associated with a potent upper level shortwave. Outflow from these storms produced a strong and persistent gust front across Campbell County.

Weston County
Upton

28	1705MST 1712MST	0	0	0		Hail (0.75)
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An isolated severe thunderstorm produced dime sized hail over Upton for 7 minutes.



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WYOMING, Northeast

Campbell County

4 S Gillette to
Gillette

28	1920MST 2230MST			0	0	400K	Flash Flood
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Heavy rain began falling over the Donkey Creek drainage, just south of Gillette, around 5 pm MST. Rainfall rates over 2 inches per hour were recorded. A National Weather Service spotter recorded a storm total precipitation amount of 7.5 inches during the evening. Donkey Creek quickly rose to flood stage, tearing up paved golf cart paths and a service bridge located at the Gillette Country Club. Water depth was recorded at 4ft by a water mark on a stop sign at Four J Road near Southern Drive at 7 pm MST. In downtown Gillette, several cars were reported floating down the street, and numerous businesses had 1 to 2 feet of water on the first floor. There were no injuries or fatalities, however one man was rescued from a stalled vehicle in chest deep water.

Crook County

6 S Devils Tower

29	1621MST 1631MST			0	0	0	Hail (0.88)
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Crook County

10 NW Sundance

29	1644MST 1654MST			0	0	0	Hail (0.75)
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An isolated severe thunderstorm moved across Crook County. The storm produced dime to nickle sized hail.